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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/488,351	01/20/2000	Terry L. Cole	2000.023000	4297
23720	7590	11/21/2006	EXAMINER	
WILLIAMS, MORGAN & AMERSON 10333 RICHMOND, SUITE 1100 HOUSTON, TX 77042			AHN, SAM K	
			ART UNIT	PAPER NUMBER
			2611	

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/488,351

Applicant(s)

COLE, TERRY L.

Examiner

Sam K. Ahn

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-32,35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-32,35 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Response to Arguments

2. Applicant's arguments, see Interview Summary, filed 03/15/06, with respect to the rejection(s) of claim(s) 2-32,35 and 36 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Wu US 6,219,378 B1(cited previously) in view of McHale et al. US 6,278,728 B1 (McHale) and Wiese et al. US 6,434,119 B1 (Wiese, cited previously).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2, 3, 5, 6, 11-14, 16,17, 21-25, 28, 29, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu US 6,219,378 B1(cited previously) in view of McHale et al. US 6,278,728 B1 (McHale) and Wiese et al. US 6,434,119 B1 (Wiese, cited previously).

Regarding claim 2, Wu teaches a method and apparatus comprising establishing a communication channel between a first transceiver and a second transceiver (see Fig.9) comprising determining (70C), and performing (72C), at the first transceiver (central office modem), a training parameter in response to establishing the communication channel (PSD REVERB), and providing (72C) the training parameter to the second transceiver (remote modem). The first transceiver calculates the training parameter (70C), and both transceivers perform training (72R,74C,76R,76C), and provide the training parameter (72C,74R,76C,76R) to the other transceiver (see Fig.9). Furthermore, Wu also teaches performing training parameters (74C in Fig.9) based on parameters implemented to increase the performance of the first transceivers.

However, Wu does not explicitly teach the first transceiver determining the training parameter, performing the training parameter, and transmitting the training parameter to the second transceiver.

McHale teaches a first transceiver (see Fig.3) calculating the training parameter (62 - 68) and performing training (70-82). Hence, McHale teaches performing training parameter based on parameters implemented to increase the performance of the first transceiver. Thus, both Wu and McHale teach first transceiver performing training parameters based on a superior quality of parameters, regardless of whether the training parameters are generated from the first transceiver or is received from the second transceiver. Furthermore, the training parameters used by the second transceiver (72R) provides superior quality for its own training, and

therefore, the same training parameter is sufficient to provide superior quality to the first transceiver. Hence, the second transceiver providing the training parameters and the first transceiver providing its own training parameters, both methods provides superior quality of training parameters. Therefore, it would have been obvious to one skilled in the art at the time of the invention to recognize that calculating the training parameter performed by the first transceiver and transmitting the training parameter to the second transceiver, and further, the second transceiver transmitting training parameter to the first transceiver to perform training is identical to the process of the first transceiver calculating the training parameter, performing training, and transmitting the training parameter to the second transceiver, as the first transceiver is adjusted through the training parameter, and further in the system of Wu, both transceivers is optimally adjusted for transmission .

However, Wu in view of McHale do not explicitly teach wherein the communication channel establishment was performed in low power mode.

Wiese teaches, in the same field of endeavor, a method and apparatus comprising establishing a communication channel between a first transceiver and a second transceiver in low power mode, (note col.6, lines 16-33) wherein Wiese teaches transmission of an initialization signal at a lower power level or in a low power mode, and increasing the power level until the signal is received by the other transceiver.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to initialize the communication channel in low power in the system of Wu

for the purpose of reducing power consumption and potentially minimize interference with other modem lines that may be affected as noise when high powered signaling is performed, as taught by Wiese (note col.6, lines 16-33).

Regarding claim 3, Wu in view of Wiese teach all subject matter claimed, as applied to claim 2 or 13. Wiese further teaches wherein transmission of remote initialization signal at a relatively low power level and incrementing until the signal is detected. (note col.6, lines 16-30) Therefore, it is inherent that the increment of level of power taught by Wiese is the smallest amount of power acceptable, since the signal is acceptable only after it has been detected.

Regarding claim 5, Wu in view of Wiese teach all subject matter claimed, as applied to claim 2 or 13. Wiese further teaches computation of signal to noise ratio for determining the training parameter. (note claim 10) Signal to noise ratio includes determination of phase and amplitude distortion, and therefore it is inherent that the training parameters include determining phase and amplitude distortion of the communication channel.

Regarding claim 6, the claim is rejected as applied to claim 5 with similar scope.

Regarding claim 11, Wu in view of Wiese teach all subject matter claimed, as applied to claim 2. Wiese further teaches providing a training parameter to the first transceiver by the second transceiver. (see 239, 243 in Fig.5 and note col.9, lines 20-36)

Regarding claim 12, the claim is rejected as applied to claim 2 with similar scope.

Regarding claim 13, Wu in view of Wiese teach all subject matter claimed, as applied to claim 12. Wiese further teaches transmitting and receiving data with the transceiver (VTU-R) (see Fig.5).

Regarding claim 14, the claim is rejected as applied to claim 3 with similar scope.

Regarding claim 16, the claim is rejected as applied to claim 5 with similar scope.

Regarding claim 17, the claim is rejected as applied to claim 5 with similar scope.

Regarding claim 21, the claim is rejected as applied to claim 2 with similar scope.

Regarding claim 22, Wu in view of Wiese teach all subject matter claimed, as applied to claim 21. Wiese further teaches that the first and second transceiver is a DSL modem. (see Fig.1a where the remote (R1~RN and O1~ON are modems in the remote or customer area and the latter are modems in the central location).

Regarding claim 23, the claim is rejected as applied to claim 22 with similar scope.

Regarding claim 24, the claim is rejected as applied to claim 3 with similar scope.

Regarding claim 25, the claim is rejected as applied to claim 5 with similar scope.

Regarding claim 28, the claim is rejected as applied to claim 2 with similar scope.

Regarding claim 29, the claim is rejected as applied to claim 3 with similar scope.

Regarding claim 35, the claim is rejected as applied to claim 2 with similar scope.

Regarding claim 36, the claim is rejected as applied to claim 2 with similar scope.

4. Claims 4, 15 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu US 6,219,378 B1(cited previously) in view of McHale et al. US 6,278,728 B1 (McHale) and Wiese et al. US 6,434,119 B1 (Wiese, cited previously) and in further view of Palm US 6,751,254 B1 (cited previously).

Regarding claim 4, Wu in view of McHale and Wiese teach all subject matter claimed, as applied to claims 2 or 13, however, do not explicitly disclose power cutback in the range of 0-30 dB.

Palm teaches power adjustments wherein during initialization, power levels are incremented in the increments of 2 dB, a predetermined level. (note col.6, lines 27-43) Therefore, it would have been obvious to one skilled in the art at the time of the invention to implement Wiese's teaching of initializing the communication channel in low power mode by incrementing in 2 dB, as taught by Palm, for the purpose of appropriately incrementing, without incrementing too rapidly, nor incrementing too slowly, and establish connection.

Regarding claim 15, the claim is rejected as applied to claim 4 with similar scope.

Regarding claim 30, the claim is rejected as applied to claim 4 with similar scope.

Regarding claim 31, the claim is rejected as applied to claim 4 with similar scope.

Regarding claim 32, the claim is rejected as applied to claim 4 with similar scope.

5. Claims 7-10,18-20,26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu US 6,219,378 B1(cited previously) in view of McHale et al. US

6,278,728 B1 (McHale) and Wiese et al. US 6,434,119 B1 (Wiese, cited previously).and Olafsson USP 5,870,438 (cited previously).

Regarding claim 7, Wu in view of McHale and Wiese teach all subject matter claimed, as applied to claim 2,17 or 25, however, do not explicitly teach wherein determining the training parameter includes a transmitter characteristic of the second transceiver including a symbol timing, carrier frequency, and carrier phase of the transmitter.

Olafsson teaches fast synchronization in a modem, and further teaches wherein the training parameter includes the transmitter characteristic of a symbol timing, carrier frequency, and carrier phase of the transmitter (note col.1, lines 29-37). Therefore, it would have been obvious to one skilled in the art at the time of the invention to include the training parameters taught by Olafsson in Wu's training parameter for the purpose of increasing data transmission at a high data rate (note col.1, lines 37-39).

Regarding claim 8, the claim is rejected as applied to claim 7 with similar scope.

Regarding claim 9, the claim is rejected as applied to claim 7 with similar scope.

Regarding claim 10, the claim is rejected as applied to claim 7 with similar scope.

Regarding claim 18, the claim is rejected as applied to claim 7 with similar scope.

Regarding claim 19, the claim is rejected as applied to claim 7 with similar scope.

Regarding claim 20, the claim is rejected as applied to claim 7 with similar scope.

Regarding claim 26, the claim is rejected as applied to claim 7 with similar scope.

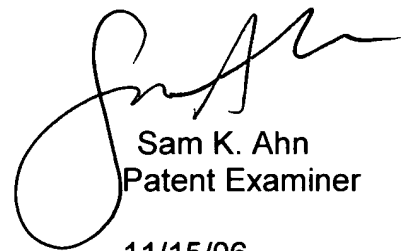
Regarding claim 27, the claim is rejected as applied to claim 7 with similar scope.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Ahn whose telephone number is (571) 272-3044. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sam K. Ahn
Patent Examiner

11/15/06